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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/516,176	03/01/2000	Takayoshi Sasaki	PM 266297	3428

7590 09/09/2011
PAUL E. WHITE, JR.
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WASHINGTON, DC 20036-3307

EXAMINER

LE, HOA T

ART UNIT	PAPER NUMBER
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1788

MAIL DATE	DELIVERY MODE
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09/09/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/516,176	Applicant(s) SASAKI ET AL.	
	Examiner Hoa (Holly) Le	Art Unit 1788	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 1,2,4-15,18-21,23 and 25 is/are pending in the application.
- 5a) Of the above claim(s) 7,13 and 15 is/are withdrawn from consideration.
- 6) ☒ Claim(s) 1,2,4-6,8-12,14,20 and 21 is/are allowed.
- 7) ☒ Claim(s) 18,19,23 and 25 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 18, 19, 23 and 25 stand rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling for the reasons set forth in the last office action and further discussed herein. The process of making the fine hollow powder and the particle size of 0.1 to 5000 μm are critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

It can be seen from the description at page 8, lines 15-27 that, the claimed feature "laminated oxide particles stuck together" cannot be independently possible because the "formation mechanism" is "presumed" by the process of making, which is spray drying. Therefore, without the process associated with the product features, the claim is based on a non-enabling disclosure. In addition, that the term "laminated particles 2 are stuck with one another to form a fine hollow powder 3" is only disclosed in connection with a particle size of 0.1 to 5000 μm . Therefore, the claims with fail to include these two critical limitations are deemed non-enabling.

Claim 1 has been amended to include all critical elements as discussed in the first paragraph rejection in the last office action. However, claims 18 and 23 have not been amended and thus the rejection, as stated in the last office action and further discussed above, has not been overcome.

Election/Restrictions

3. Claims 1, 2, 4-6, 8, 9, 20, and 21 allowable. The restriction requirement, as set forth in the Office action mailed on May 17, 2005, has been reconsidered in view of the allowability of claims to the elected invention pursuant to MPEP § 821.04(a). **The restriction requirement is hereby withdrawn as to any claim that requires all the limitations of an allowable claim.** Claims 8-12 and 14 are no longer withdrawn from consideration because the claim(s) requires all the limitations of an allowable claim. However, claims 7, 13, and 15, directed to exfoliated titania sol, mixed alkali metal titanate, and layered titanate acid compound, respectively, remain withdrawn from consideration because these claims do not require all the limitations of an allowable claim.

In view of the above noted withdrawal of the restriction requirement, applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Once a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

4. This application contains claims 7, 13 and 15 drawn to an invention nonelected with traverse in the reply filed on June 15, 2005. A complete reply to the final rejection

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must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Allowable Subject Matter

5. Claims 1, 2, 4-6, 8, 9, 20, and 21 are allowed.
6. Claims 8-12 and 14 have been rejoined for examination and found allowable.
7. The following is a statement of reasons for the indication of allowable subject matter: None of the prior art references, singly or combined, teaches or suggests the process of spray drying in making hollow particles having the shell structure as claimed, i.e. laminated titanium oxide particles stuck together. EP 0 601 594 ("EP'594") teaches hollow particles comprising fused or sintered titanium oxide particles in the shell and having the shell/wall thickness ratio within the claimed range. However, the titanium oxide particles on the shell of EP'594 powder are not laminated particles. EP'594 teaches a spraying method to form the hollow particle, but either titania sol or a dispersion of precursor of titania is used in spraying instead of an exfoliated titania sol. Accordingly, laminated titanium oxide particles cannot be formed on the shell as required in claims the instant claims because the titanium oxide used in spraying taught by EP'094 is not a suspension of exfoliated titania.
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoa (Holly) Le whose telephone number is (571)272-1511. The examiner can normally be reached on 12:30 p.m. to 9:00 p.m. (EST), Mondays to Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alicia Chevalier can be reached on 571-272-1490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hoa (Holly) Le/
Primary Examiner, Art Unit 1788

September 8, 2011